

Amendments to the Claims

Claims 1-3 (cancelled).

Claim 4: (original): A method of forming a capacitor structure, comprising:

forming a first electrical node;

forming a layer of metallic aluminum over the first electrical node;

transforming an entirety of the metallic aluminum within the layer of metallic aluminum to AlN, AlON, or AlO; wherein the listed compounds are described in terms of chemical constituents rather than stoichiometry; the transformed layer being a dielectric material over the first electrical node; and

forming a second electrical node that is electrically separated from the first electrical node by at least the dielectric material; the first electrical node, second electrical node and dielectric material together defining at least a portion of a capacitor structure.

Claim 5: (original): The method of claim 4 wherein the transforming occurs at a temperature which does not exceed 200°C.

Claim 6: (original): The method of claim 4 wherein the transforming comprises transforming an entirety of the metallic aluminum within the layer to AlN.

Claim 7: (original): The method of claim 4 wherein the transforming comprises transforming an entirety of the metallic aluminum within the layer to AlN to form a resulting AlN layer; the resulting AlN layer having a thickness of from about 20Å to about 40Å.

Claim 8: (currently amended): The method of claim 4 wherein the transforming comprises transforming an entirety of the metallic aluminum within the layer to AlN to form a resulting AlN layer; and further comprising:

forming a ~~second~~ another layer of metallic aluminum ~~on~~ over the resulting AlN layer; and

transforming an entirety of the ~~second~~ other layer of metallic aluminum to AlON to form a resulting AlON layer.

Claim 9: (original): The method of claim 8 wherein the resulting layer of AlN has a thickness of from about 10Å to about 20Å, and wherein the resulting layer of AlON has a thickness of from about 10Å to about 20Å.

Claim 10: (original): The method of claim 4 wherein:

the first electrical node comprises conductively doped silicon;

the layer of metallic aluminum is formed on the first electrical node; and

the transforming comprises transforming an entirety of the metallic aluminum within the layer to AlN to form a resulting AlN layer; the resulting AlN layer having a thickness of from about 20Å to about 40Å.

Claim 11: (original): The method of claim 4 further comprising forming a layer of silicon dioxide between the first electrical node and the layer of metallic aluminum; and wherein:

- the first electrical node comprises conductively doped silicon;
- the layer of silicon dioxide is formed on the first electrical node;
- the layer of metallic aluminum is formed on the layer of silicon dioxide; and
- the transforming comprises transforming an entirety of the metallic aluminum within the layer to AlN to form a resulting AlN layer.

Claim 12: (original): The method of claim 11 wherein the resulting AlN layer has a thickness of from about 20Å to about 40Å.

Claim 13: (original): The method of claim 11 wherein the layer of silicon dioxide has a thickness of greater than 0Å and less than or equal to about 15Å.

Claim 14: (currently amended): The method of claim 11 further comprising:

- forming a ~~second~~ another layer of metallic aluminum ~~on~~ over the resulting AlN layer; and

- transforming an entirety of the ~~second~~ other layer of metallic aluminum to AlO to form a resulting AlO layer.

Claim 15: (original): The method of claim 14 wherein the resulting layer of AlN has a thickness of from about 5Å to about 15Å; wherein the resulting AlO layer has a thickness of from about 5Å to about 15Å; and wherein the layer of silicon dioxide has a thickness of from about 5Å to about 15Å.

Claim 16: (original): The method of claim 4 wherein the transforming comprises transforming an entirety of the metallic aluminum within the layer to AlON.

Claim 17: (original): The method of claim 4 wherein the transforming comprises transforming an entirety of the metallic aluminum within the layer to AlON to form a resulting AlON layer; the resulting AlON layer having a thickness of from about 20Å to about 40Å.

Claim 18: (original): The method of claim 4 wherein:

the first electrical node comprises conductively doped silicon;

the layer of metallic aluminum is formed on the first electrical node; and

the transforming comprises transforming an entirety of the metallic aluminum within the layer to AlON to form a resulting AlON layer; the resulting AlON layer having a thickness of from about 20Å to about 40Å.

Claim 19: (original): The method of claim 4 further comprising forming a layer of silicon dioxide between the first electrical node and the layer of metallic aluminum; and wherein:

the first electrical node comprises conductively doped silicon;

the layer of silicon dioxide is on the first electrical node;

the layer of metallic aluminum is on the layer of silicon dioxide; and

the transforming comprises transforming an entirety of the metallic aluminum within the layer to AlON to form a resulting AlON layer.

Claim 20: (original): The method of claim 19 wherein the layer of silicon dioxide is formed before forming the layer of metallic aluminum.

Claim 21: (original): The method of claim 19 wherein the resulting AlON layer has a thickness of from about 10Å to about 20Å.

Claim 22: (original): The method of claim 19 wherein the layer of silicon dioxide is formed after forming the layer of metallic aluminum and during the transforming of the layer of metallic aluminum.

Claim 23: (original): The method of claim 19 wherein the layer of silicon dioxide has a thickness of greater than 0Å and less than or equal to about 15Å.

Claim 24: (original): The method of claim 4 wherein the transforming comprises transforming an entirety of the metallic aluminum within the layer to AlO.

Claim 25: (original): The method of claim 4 wherein the transforming comprises transforming an entirety of the metallic aluminum within the layer to AlO to form a resulting AlO layer; the resulting AlO layer having a thickness of from about 10Å to about 20Å.

Claim 26: (original): The method of claim 4 further comprising providing a transistor adjacent the capacitor structure; the transistor and a capacitor structure together defining a DRAM cell comprising the transistor and the capacitor structure.

Claims 27-34 (cancelled).

Claim 35 (new): A method of forming capacitor structures, comprising:

forming a dielectric capacitor region over a first electrical node, the forming the dielectric region comprising:

forming a layer of metallic aluminum over the first electrical node,

the layer of metallic aluminum having a thickness less than 40 Å; and

exposing the layer of metallic aluminum to one or both of O or N at a temperature less than 300°C to form a dielectric material comprising aluminum and one or both of O and N; and

forming a second electrical node over the dielectric region, the first electrical node, the dielectric region, and the second electrical node comprising a capacitor structure.

Claim 36 (new): The method of claim 35 wherein the first electrical node comprises silicon and the dielectric material consists essentially of aluminum and one or both of O and N.

Claim 37 (new): The method of claim 35 wherein first electrical node comprises silicon and the dielectric material consists of aluminum and one or both of O and N.

Claim 38 (new): The method of claim 35 wherein the forming the dielectric region further comprises, prior to forming the layer of metallic aluminum, forming a silicon dioxide-comprising layer over the first electrical node, wherein the dielectric region comprises the silicon dioxide-comprising layer and the dielectric material.

Claim 39 (new): The method of claim 38 wherein the silicon dioxide-comprising layer is between the dielectric material and the first electrical node.

Claim 40 (new): The method of claim 38 wherein the dielectric material physically contacts the silicon dioxide-comprising layer and the dielectric material consists essentially of aluminum and one or both of O and N.

Claim 41 (new): The method of claim 38 wherein the dielectric material physically contacts the silicon dioxide-comprising layer and the dielectric material consists of aluminum and one or both of O and N.

Claim 42 (new): The method of claim 35 wherein the forming the dielectric region further comprises, after forming the dielectric material:

forming another layer of metallic aluminum over the dielectric material; and
exposing the other layer of metallic aluminum to O or N to form another dielectric material comprising one or both of O and N, wherein the dielectric materials have different compositions from one another.

Claim 43 (new): The method of claim 42 wherein the dielectric material comprises aluminum nitride and the other dielectric material comprises aluminum oxide.

Claim 44 (new): The method of claim 42 wherein each of the dielectric materials has a thickness of less than 20 Å.